

CONFIDENTIAL

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6 November 1952

MEMORANDUM TO THE FILES : Trip Report

FROM : 50X1

SUBJECT : Gasoline Power Unit Mechanical 50X1

REFERENCE : Contract XG-866, Jacobsen Mfg. Co., Racine, Wis.

1. A visit was made to the Jacobsen Mfg. Co., Racine, Wis. on October 17, 1952 for the purpose of checking on the progress being made on the subject Contract. Those present were:

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2. Work has been started on this unit and the first preliminary model has been made and tried out. At the time of the visit it was disassembled, so could not be demonstrated. However, quite a few problems have to be overcome before it can be said that the unit is finally developed.

3. As it is now constituted, a clamp or yoke, holds the generator at each end of the shaft and this yoke in turn is fastened to the gasoline power unit. A planetary gear train having a gear reduction of 80 to 1 is fastened to the end of the engine shaft. The power from this gear train is transmitted by a roller chain to the generator shaft, thus driving the generator at its rated r.p.m.

4. One of the serious difficulties of this unit at the present time is noise. Due to the extremely large reduction (80 to 1) and the high speed of the gasoline engine (4800 r.p.m.) the tooth velocity of the planetary gearing is extremely high. An attempt to overcome this will be made by running the gearing in an oil bath and by using precision cut gears. The present gears are an ordinary cut, as used in power movers and no particular care was used in cutting them, except for standard production techniques. In another month some of above difficulties will probably have been overcome.

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